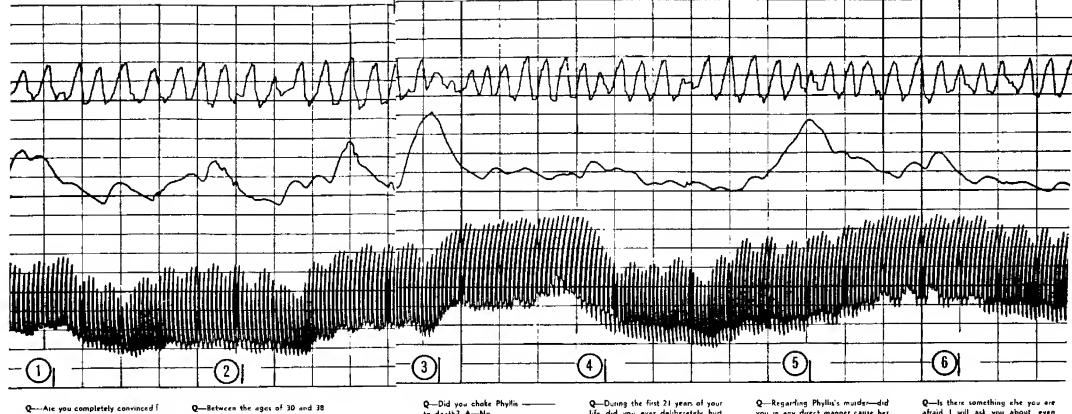


**RECORD OF A POLYGRAPH TEST**

"Interpreting the peaks and valleys on a lie-detector graph is like trying to determine from a weather map if it is going to rain on your street tomorrow." Shown here is a series of six questions recorded from the defense attorney's request. First the examinee and suspect went over all of the questions that were to be asked in the course of the test. Then instruments were connected to the suspect's chest, palm and arm, and the examiner began: "Please sit quietly with your feet on the floor. Look straight ahead and by not to move . . ." Two lead-in questions—"Were you born in the U.S.?" and "Regarding the killing of Phillips—do you intend to answer truthfully each question?"—were followed by six key questions recorded by the three lines on the chart: breathing pattern (top), perspiration rate (middle), pulse and blood pressure (bottom). The numerals indicate the point at which each question was asked. The questions and answers, with the examiner's comments on them (in italics), appear below.



# **Lie Detectors Don't Lie, But—**

By WALTER GOODMAN

**I**T is about forty years since the detector obtruded itself upon us, and for most of that time it has been under attack as an unreliable, inhumane and immoral device. Our higher courts have spurned it. Psychologists have debunked it. Civil libertarians have denounced it. Journalists have exposed it. And a few weeks ago an intelligence expert announced that it was depriving the

announced that it was depriving the Free World of many spies.

Dr. Stefan T. Possony, director of international studies at the Hoover Institution on War, Revolution and Peace, warned that the use of the instrument in pre-employment screening by the Central Intelligence Agency had, for example, opened the spying field both to homosexuals, who lack all guilt about their deviations, and to Russian agents, who are trained to outwit it. If experience is any guide, this is dangerous information.

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**WALTER GOODMAN** is an editor and author whose most recent book, "All

There is not much question that it is progressing, although details are

it is prospering, although details are traditionally elusive. For what information we have, we are largely in debt to a House of Representatives subcommittee on government operations, headed by Representative John E. Moss, Democrat of California, which embarked last spring on the first full-scale investigation of the lie detector mystique. It was prompted by the indignation of Representative Cornelius E. Gallagher

Democrat of New Jersey, upon learning that a 17-year-old girl had been asked "many questions concerning not only her private life but her sex life" while trying to get a job as clerk-type with an unnamed body that Representative Gallagher hinted was the National Security Agency.

limbs, owns 512 polygraphs, with which it carried out 19,122 tests in the fiscal year ended June, 1963. This House survey was won easily by the Army, which gave 12,494 tests that year, a quarter of them to Cuban émigrés seeking to enlist. The Cuban Bureau of Investigation reported giving 2,314 tests. Two bodies not included in the overall figures are the Central Intelligence Agency and the National Security Agency, the Defense Department's intelligence arm; both use lie detectors on a routine basis, and if they chose to tell how many

Polygraphy is popular in the private domain, too. Several hundred firms are busy serving major companies in steel, copper, meat packing, food processing, drugs, oil and electronics. Cleve Packetedt, whose Backster School of Lie Detection occupies a set of slightly surrealistic offices on West 46th Street, serves such local firms as Carey Transportation, for whom he screens everybody from

about the safety of its bread in transit, and Alexander's department store, which channels all security personnel through the hi detector and also orders a test now and then to catch a thief. Mr. Backster, who claims that he helped set up the C. I. A.'s polygraph program in 1948, charges from \$25 to \$55 a test for his standing academic counts and slightly more for transients; the unit once goes down to

**A**T the center of this somewhat mysterious trade is an altogether un-mysterious instrument. (Men in the line dislike hearing them called machines almost as much as they do hearing themselves called operators. They are *communicators*.) The instrument in common use today was developed in 1826 by a criminologist named Leonard Keeler. He incorporated into what one authority calls "a fairly crude piece of instrumentation" 30 years of experiments by others on the connection between lying and

the picturesque language of Representative Henry S. Reuss, Wisconsin Democrat, are: "Does he swear? Does he palpitate? Does he par-

Three devices are attached to subject's body—a pneumograph corrugated rubber tube around chest that expands and contracts as one breathes; a sphygmomanometer—an inflatable rubber cuff around upper arm familiar to anybody has ever had his blood pressure taken; and two electrodes on hand to measure the subject's "vagus skin response" that is,

matey, how damp his palm gets.

Each of these devices is attached by a rubber hose to a pen which point touches a moving strip of paper. If the subject's breathing, blood pressure and pulse and respiration proceed at a regular rate, the three pens will make regular little waves on the sheet of paper which, by the way, accounts for the word "polygraph." Graph means "writings." Should there be an abnormal change in any of the physiological

The man behind the polygraph, of course, does not really care about

course does not really understand the rhythms of his patient's internal organs. What intrigues him is an abrupt change in response to a critical question, such as whether the subject murdered his wife, helped himself at the cash register or enjoyed homosexual play. The faith of the examiner is that a false answer to this kind of question will play havoc with the liar's emotions, which will in turn speed up his heartbeat, distract

**C**ONSIDERABLE skill and experience are required to formulate and conduct a polygraph test. The questions must be carefully phrased to eliminate ambiguity. ("A murderer once got away with saying he hadn't murdered Mabel because he was thinking of a different Mabel.") They should include "stipulations to the innocent" questions ("Would you have been afraid to go home alone at night?") so that the subject can answer "no" without being accused of lying.

of blameless character is supposed remember something that will make the pens dance. Several neutral questions like "Is today Wednesday?"

The examiner must talk with the subject beforehand to make certain that he is not a lunatic, because anybody who knows he is Napoléon will come through the test without blemish. The examiner must also weed out the distraught and the drugged, the drunk and the drugged. He must control himself, since any

hint of hostility on his part may rattle his client that the graph will come out looking like a tracing of the Himalayas.

He must keep his strapped-in companion calm and quiet, twisted and crumpled sometimes try to arouse the polygraph at irrelevant moments (wiggling their toes), but he must also get him psychologically primed for the crucial question about whether he used hemlock on his wife or piece of pipe. This is accomplished

If the subject is not a murderer or suspect, but merely a job applicant, the questions range more widely in search of indiscretions, the idea

this case is to locate the areas which an employe might some prove vulnerable. If a man seems be answering suspiciously the examiner is supposed to pause and give him an opportunity to confess or plain or otherwise relieve his conscience. The test, which takes between five and ten minutes, is given to the subject two or three times, a rule

**T**HE job of interpreting the peaks and valleys on the graph is rather like trying to determine from a weather map if it is going to rain on your street tomorrow. Since sensitive honest man may show more dramatic reactions on his graph than a phlegmatic criminal, it is up to the examiner to decide in each case how high a peak must rise before it means that his patient is lying; different examiners may arrive at different diameters of the same "chart".

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**Lie Detectors Don't Lie, But—**

(Continued from Page 13) screening, a cautious examiner can set his point of deception low enough so that he eliminates every lie at the expense, unfortunately, of eliminating quite a number of non-lies as well. Researchers at Fordham University did a study for the Army Signal Corps in 1962 on the feasibility of replacing the lying polygraph examiner with a computer. The idea turned out to be undesirable because there are still no objective criteria for determining what degree of response on the polygraph indicates guilt.

J. Edgar Hoover, no great admirer of the polygraph, spoke for all concerned some years ago when he said: "The name [lie detector] is a complete misnomer. The machine is not a lie detector. The person who operates the machine is the lie detector."

Writing in the Yale Law Journal, Prof. Jerome H. Skolnick cautioned that "the detection requires *at least* as much interpretation as tests performed by clinical psychologists or various medical specialists . . . It requires physiological, psychological, and sociological judgment which even practitioners in those fields would draw only with caution."

**W**e lack a census of polygraph examiners, but best estimates place their number somewhere between 2,000 and 3,000. Only three states—New Mexico, Kentucky and Illinois—have the craft, but nearly half a dozen, to date in 1963 with both houses of the State Legislature passed a licensing bill, but Governor Rockefeller did not sign it. In most places, there is

**"Our Executive Branch, not counting its supersecret departments, has 512 polygraphs, with which it gave 19,122 tests in a year."**

nothing except price which, in the catalogue of the nation's major manufacturers, ranges from \$600 for a 2-pen Portable Decryptograph to \$2,995 for a 4-pen Deluxe Desk Decryptograph to keep an ambitious private eye from buying a polygraph, reading the instructions that come with it and setting to work

sorting out the pure from the impure in supermarkets around the land.

Among the relatively reputable schools in contemporary polygraphy, the most rigorous requirements for examiners have been established by John E. Reid & Associates of Chicago, one of the half-dozen schools now in operation. The Reid school demands a college degree, six months of training and six months of work under supervision, and these requirements are reflected in the Illinois licensing law. Cleve Backster, however, labels them "snobish," and indeed only a few dozen examiners have gone through such an ordeal.

The more usual program, such as that at the Army Provoost Marshal General School at Fort Gordon, Ga., where a large proportion of Government examiners train takes just seven weeks; that includes seven hours in abnormal psychology taught by a non-psychologist. A Pasadena, Calif., school which has been patronized by the United States Post Office Department charges \$575 for a four-week course.

Prof. Fred E. Inbau of Northwestern University's School of Law and co-author with Mr. Reid of the only lie-detector textbook in existence, estimates that 80 per cent of the polygraph examiners now at large are unqualified (by the standards of the American Psychiatric Association, the other 20 per cent are unqualified, too.)

**W**HATEVER reservations the colleagues in polygraphy may have about one another, they share a high regard for their instrument. An associate of John Reid claims that "we can make decisions in better than 90 per cent of the cases tested . . . [with] an accuracy capability of less than a 2 per cent error." Among the Reid school's satisfied clients is the recently director of a large Chicago retail store, who reports that thefts among employees who have not enjoyed a pre-employment test run far times higher than among those who have.

Even its most implacable critics concede that the polygraph can, in appropriate circumstances, trip up the guilty, and polygraphers are able to produce a sizable dossier of crimes which have been solved with their help, beginning with Leo Frank's conviction in 1944 in killing the killers of a German prisoner of war, which started the Army's love affair with his invention. Professionals take special pride in the case where a rape suspect's innocence was first inferred

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(Continued from Preceding Page) dictated by a polygraph, when all the other evidence was against him. "My greatest satisfaction," says Cleve Backster, "is where a guy who everybody thought was in the wrong turns out to be truthful. I like to think of the polygraph as a truth detector." Mr. Backster, who is lobbying for a New York licensing statute that will weed out unscrupulous examiners, has designed his own two-way mirror



TRIAL RUN—Cleve Backster (foreground), polygraph expert, and an assistant show how the lie detector works.

is no way of identifying the emotion by study of physiological changes." Any number of extraneous emotions such as irritation at having to answer personal questions from a fellow who you have every reason to believe is not deeply committed to your welfare may jar the pens. On the other hand, if the teste wants to hold his breath for the fun of it, he can do that, too. The best way to beat the lie detector is to show exite-

ment at the wrong questions.

Nor are critics troubled by John Reid's assurance that an examiner who can't distinguish one type of reaction from another "is not much of an examiner." Psychiatrists insist that the unconscious is tricky terrain, and it is easy to be misled if you try to map it with a sphygmomanometer.

**T**HE asserted deficiencies of the instrument and its users have aroused social concern in job screening, where the lie detector reputedly eliminates one out of every three or four applicants. Writing in *The Harvard Business Review* in 1962, three students of the polygraph summed up:

"An individual is persuaded by social pressures to testify against himself through a distorted, error-ridden medium; he may be denied the right to work without ever knowing the reason why; he may be convicted of certain tendencies without having committed an illegal act; and he has no defense against the operator's report since it is unknown to him and he has

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